

Superior Customer Value through Mass Customization

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Abstract

Market-focused management posits that organizations should provide outstanding value to customers, because they are the most important organizational stakeholders.

In this new information-based economy customers are so sophisticated and their wants and preferences are so varied. In fact they are looking for benefits of customized products but all of them do not afford to pay for its high prices. Therefore marketers who try to meet customer's needs and wants and finally provide value to them deal with a great challenge.

As Pine says mass customization as a new paradigm of management makes possible the providing each customer with the tailor-made benefits of the pre-industrial craft system at the low costs of modern mass production.

This paper discusses about making value for customers through mass customization.

Key words

Customer value, Mass customization, Mass production

1. Introduction

The information is rapidly becoming a reality in the world. A new informational revolution, possibly as significant as the industrial revolution is about to begin. This new age have been created by number of changes and developments.

As Rayport and Jawrosky say this revolution is enabled and accelerated by technology change (Rayport, Jawrosky, 2002).

On the other hand information technology has brought most of these changes.

By starting the information age business have been changed a lot. In this new business environment companies must redefine and rework the relationships they have with every one in order to be survived. This means rethinking relationships between different actors in business environment.

The changes and developments in technology have created a very new kind of customers and, consequently a new set of rules for companies and competition.

These new customers have an easy availability of so much information about different products, companies, prices, brands and so forth. Therefore they have got a kind of sophisticated customers who know very much and then have high expectations from companies.

This shift of customers in new networked economy brings a parallel shift for companies too. Nowadays companies can not produce their own products based on their forecasts and then sell them to customers.

Today customers have a lot of choices and they can choose the best one. Therefore competitors are trying to convey the most value to customers and satisfy them better than others.

Customers in information society don't like to be seen as mass consumers, but they like to be known as different

and unique consumers who have different needs and wants.

In this condition mass produced products and services can not satisfy and create value for these high expected customers. Hence companies have started to see each customer as a different and unique one and deal with his/her needs and wants as a different case. In this regard mass customization strategies and tactics have been introduced to satisfy customers' needs better and better and make superior value for them.

In the other words, mass customization manufacturing (MCM) has been gaining recognition as an industrial revolution in the 21st century (Qiao, et al., 2003).

Mass customization can be defined as a proactive management of variety that can build customized products for individual customers and niche markets. On the other word mass customization is a broadly based term encompassing vast changes in manufacturing, distribution, and delivery of products. Something that Pine defines it as "the mass production of individually customized goods and services (Pine, 1993).

This paper discusses how companies can make superior value for customers, by bringing their ideas and wants into manufacturing process through mass customization.

2. What are customers looking for?

Customers have different needs and therefore a lot of wants. So they are looking for companies which can help them to satisfy their needs and wants. According to Hatton (2000), customers only buy products and services to solve problems.

Because of a high competition that is emerged in new markets in which different companies are trying to fulfill customers' needs better than each other, customers now have a lot of choices and they can choose the best one.

But they are looking for a company that can satisfy their needs completely and bring more value for them.

As Kotler says customers will continuously shift toward suppliers who can deliver greater value (Kotler, 2000). It has been said that if the bottom line to a business is profit, then the top line is providing value to customer. But the question is what the customer value really means. Something that customers in new economy are looking for.

Value is defined in different ways. According to dictionary definition, value means relative worth or importance. Or it means the perceived worth, desirability, or utility of a good (Vernon, 2002). Further more, it implies excellence based on desirability or usefulness and is represented as magnitude or quantity (Johnson & Weinstein, 2004). Value maybe best defined from the customer's perspective. On the other word, it is important to notice that there is a general agreement in the literature that customer value is determined by customers' perception not by suppliers' assumptions (Belasco and Stayer, 1993). As Doyle (1989), puts it: value is not what the producer puts in, but what the customer gets out. From this point of view value is defined as "what buyers are willing to pay" (Hunt, 2003). Or it is the trade-off of benefits against the cost involved in acquiring a product (Cravens & Piercy, 2003). Kotler defines customer value as a ration between what the customer gets and what he gives. The customer gets benefits and assumes costs. The benefits include functional benefits and emotional benefits. The costs include monetary costs, time costs, energy costs, and psychic costs (Kotler, 2000). In the other word customer value is the ratio of benefits to the sacrifice necessary to obtain those benefits (Mc Daniel, Carl & etal, 1999). According to Woodruff and Gardial(1996) a three stage value hierarchy exists that consist of attributes, consequences, and desires and states (Johnson & Weinstein, 2004). The S-Q-I-P approach states that value is primarily a combination of service, product quality, image and price. Firms must meet acceptable threshold levels with respect to each dimension (Johnson & Weinstein, 2004).the different definition of value implies that the customer is the first and last player of value scene. And as Kotler (2000) promises customer will buy from the firm that they perceive offers the highest customer-derived value.

Definition of customer value can generally be grouped into three categories, with some variations within each category; value components model, utilitarian or benefits/costs ratio model, and means-ends models. Theses models, taken separately, are incomplete in themselves and as such their usefulness is limited. Each category emphasizes certain dimensions of the concept and pays little attention to others. However, there is a great overlap between them, which can be utilized to build an integrative configuration of the concept of customer value.

Value Components Model.

According to Kaufman (1998), the principal value elements used in value studies, are classified as: esteem value, or "want", exchange value or "worth", and utility value or "need". He says esteem value or want invokes the buyers' desire to own for the sake of ownership. Exchange value or "worth", explains why the product interests the buyer and how and when the buyer will use

the product. Utility value or "need", is the primary value element that describes the performance and physical characteristics of the product.

Benefits/costs Ratio Models

Value is defined in relation to pricing as the difference between customers' perceptions of benefits received and sacrifices incurred (Lezinski and Marn, 1997). Customers' benefits include tangible and intangible attributes of the product/service offering (Monore, 1990). The sacrifices component includes monetary and non-monetary factors such as time and effort needed to acquire and use the product/service (Butz and Goodstein, 1996).

Means-Ends Models

Means- ends models are based on the assumption that customers acquire and use products or services to accomplish favorable ends. This view is prevalent in consumer behavior literature, in particular where value is defined in terms of personal values, mental images, or cognitive representations underlying customers' needs and goals (Rokeach, 1973).

Means-end theory, according to Huber et al. (2001), postulates that linkages between product attributes, consequences produced through consumption, and personal values of consumers underlie their decision-making processes (Gutman,1991). Means are products or services, and ends are personal values considered important to consumers. Means-end theory seeks to explain how an individual's choice of a product or service enables him or her to achieve his or her desired end states (Khalifa, 2004).

Now the question is how we should create the best value for customers?

3. From Mass Production to Mass Customization

Production has a long story. From the first days of life, human being has started to produce some things to survive and continue his/her life. But producing in a large scale has been started just after industrial revolution.

New technologies, division of labor and specialization have had great impact on this process. On the other word, mass production was the by-product of industrial age tools.

Henry Ford may have been the first to introduce and develop mass production in modern times. The technique was first implemented by him in automobile industry in 1908, for the manufacture of the model T Ford automobile. Actually the production of long-runs of standardized goods and services for a mass market was introduced into United States at the beginning of the 20th century.

This kind of production has been described as the "mass production of standardized products, using dedicated machines and moving assembly lines, employing unskilled and semi-skilled labor in fragmented jobs, with tight labor discipline, in large factories (Pine, 1993).

In its simple definition, mass production is the production of large amounts of standardized products on production lines. Manufacture of goods on a large scale that aims for low unit cost and high output. In factories mass

production is achieved by a variety of means, such as division and specialization of work and mechanization. The mass production process itself is characterized by mechanization to achieve high volume, elaborate organization of materials flow through various stages of manufacturing, careful supervision of quality standards, and division of labor.

In mass production paradigm, the role of marketing department is demand forecasting and then equipment would be set and a batch of products is built to satisfy the forecast. In this way factory can purchase very large amounts of materials. And this large amounts reduces the overhead costs including shipping, purchasing negotiations, paper work, etc, associated with purchasing the parts. But on the other hand if all parts don't arrive on time or if market demand changes since the original forecast, then more parts will be produced by expensive expediting. Finished products should put in a warehouses or series of distribution centers and so forth. But the most important matter is that customers should consume all of these batch produced products. As a matter of fact mass production requires mass consumption, but nowadays customers have got more sophisticated and they like to have their own choices. So relying on forecast to order parts is becoming more problematic as product lines grow, build quantities shrink, and more markets become more turbulent and unpredictable. As selling from inventory becomes more costly and less effective, some companies try to become agile and build products "to-order".

In this new strategy, manufacturers have understood that because of the high competition, customers have got great power in the market, and they determine, what should be produced, when, how and by whom.

According to Pine (2000), customers increasingly will not buy from a business that does not share their own world view (Pine, 2000). Therefore companies are trying to bring customer's views into production process. Some thing that called "mass customization".

As Pine states: mass customization is a strategy that uses information and manufacturing technology to efficiently produce goods with maximum differentiation with low-cost production (Pine, 1993). Pine viewed mass customization, not as an extension or evolution in the history of mass production, but rather as a catastrophic shift or movement toward a totally new business paradigm. And it has been gaining recognition as an industrial revolution in 21st century (Qiao and Retail, 2003). From marketing point of view, mass customization is the ability to satisfy the particular needs and wants of individual customers at prices below those of mass produced products and services that only approximate the wishes of many customers in large market niches (Fern, 2002). According to Hart and Taylor (1996), it is the use of flexible processes and organizational structures to produce varied and often individually customized products and services at the price of standardized, mass produced alternatives (Hart and Taylor, 1996).

The point of view of this paper addresses on marketing side of mass customization. It is the process of individualizing mass-market goods and services in order to fulfill very specific and personal needs and expectations of customers, based on their own information and finally create superior value for them (Karami and Firman, 2005).

Customization has different approaches. Gilmore and Pine (1998) have identified four distinct approaches to customization, which are:

a. **Collaborative customization**

This approach follows three steps: first, to conduct a dialogue with individual customers to help them articulate their needs; second, to identify the precise offering that fulfills those needs; and third, to make customized products for them. Collaborative customization is most appropriate for businesses whose customers cannot easily articulate what they want and grow frustrated when forced to select from a plethora of options.

b. **Adaptive customization**

Adaptive customizes offer one standard, but customizable. User designs the product, so he can alter it themselves. This approach is appropriate for businesses whose customers want the product to perform in different ways and in different occasions. Available technology makes it possible for them to customize the product easily on their own.

c. **Cosmetic customization**

This approach is appropriate when customers use a product at the same way and differ only in how they want it presented. In other words, the standard offering is packaged specially for each customer.

d. **Transparent customization**

This approach is appropriate when customers' needs are predictable or can easily be deduced, and especially when customers do not want to state their needs repeatedly. Companies can offer customized products within a standard package for individual customers.

Mass customization has a lot of benefits for company and customers, which are:

1- Providing tailored products to meet particular needs, the company makes comparative shopping difficult and shift the focus from price to benefit. And whilst it is possible to manufacture at a mass product price, the company will have the option to charge a premium whilst still retailing the price of a custom product. This is in turn will open the product to a wider market.

2- Mass customization allows the ordinary man or woman in the street to acquire a product that has been produced to meet their own particular needs yet at a competitive price and thus providing exceptional value for money.

3- Customized products will differentiate against type products. And with their similar cost they will be very attractive.

4- Lead customers will provide a rich source of new ideas that can also be exploited with other customers or with new prospects.

4- on-going services can be adapted throughout the customer's life because it can be linked to the unique product.

5- Companies will forge close relationship with their suppliers, distributors and customers as they return time and time again for further unique products.

6- Satisfied and loyal customers provide excellent references and referrals.

Examples of Mass Customization

Companies in different fields of activities, such as computer, entertainment, clothing, health care and so on, have started to mass customize their products for customers. Dell computer is an example. The company manufactures or buys standard components, such as Intel processors running at different speeds, RAM modules, and monitors of various sizes and shapes. Then, by using the telephone or the internet, company listen to the customer's ideas about the shape of the cabinet and size of the monitor screen, the speed of the microprocessor, the capacity of the hard drive, keyboards, mouse, video cards, modems, speakers, data-stage systems and software. After talking with a customer and assessing his/her needs, Dell combines these components in a custom configuration. The number of possible combinations is staggering almost 16 million for desktop models alone. The result is a better fit with customers' needs, and lower costs for Dell.

Digitoe has developed a revolutionary new process for mass customization of Footwear. Digitoe utilizes the latest computer technology to scan the individual foot, and create a custom designed pair of "Shoe Lasts" to match the individual feet. A "Shoe Last" is the solid form around which is a shoe modeled. The fit of a shoe depends on the design, shape and size of the "Shoe Last". Once you have a proper fitting "Last", every pair of shoes made on that "last" will fit the same. Each Digitoe's customer will has his/her own "Shoe Last". Customer will be able to order his/her shoes in person at a Digitoe "Retail Center", by e-mail, snail mail or telephone in that time. She/he will be able to select the style, color, and the leather. The finished shoe will be sent to customer directly, and every pair will fit the same, because they are made on customer's own "personal last".

Mattel Company is other example at this regard. Mattel has brought joy to the eyes of children for many decades. From Barbie Dolls to Hot Wheels, Mattel always seems to know what kids desire. Although the mad rush for Cabbage Patch Kids can give any parent a headache, their cute faces and pets can bring a smile to every little girl who is lucky enough to receive one. Mattel has been working hard to make the delivery of those smiles a bit easier for parents. Through technology, customers are now able to order one of these irresistible toys and have it delivered right to their door. By visiting the Mattel web page, a child can design its own Barbie. The database is set up so that each child can choose Barbie's hair color, eye color, and even her name. Among other characteristics are Barbie's skin, tone, smile, hairstyle, outfit, accessories, and personality. After designing the doll, customer is only waiting for the doll shipped to his/her home for \$ 39.95 plus shipping and handling

4. Preparing superior value for customers through mass customization

As discussed in previous section, customers in new economy have got a lot of choices and they are looking for a company, which can prepare the most value for them. As a matter of fact, customers in new economy are really sophisticated and their high expectations are very difficult to be satisfied completely.

As we mentioned previously in this paper, companies in mass production paradigm, forecast the market demand and produce mass produced products for mass onsumers. But in this new networked economy, this strategy is not suitable at all and companies have to look at each customer as a unique and totally different one who looks for his/her own values.

Therefore, now it is the time to shift he paradigm. The overall paradigm shift could be described as evolving from mass production to mass customization. Or changing form build-to-forecast to build-to-order. In many markets it is not only possible but also imperative, to mass customize for customers. Buyers have often individual problems that require unique solution. Giving customers what they want and how they want, it will grow their loyalties (Johnson and Weinstein, 2004).

In this paradigm, companies look at each customer as a unique and different customer and tries to tailor its products completely to his/her needs. Actually in mass customization, customer enters in production process and his/her world view and ideas are brought in to production process.

By customization, in fact, companies define value from customer's point of view. Therefore, customer engages in production process step by step and feels that he/she has a great impact on the product that is produced for him/her.

It should be emphasized that customization have been existed long time ago. But new technological developments enable efficient customization of products and services, even when the customer base is quite large (Johnson and Weinstein, 2004).

5. Conclusions

The informational revolution has changed the economy and now we have a kind of information or networked economy. As a matter of fact, this revolution is enabled and accelerated by informational technology change.

By starting the information age the paradigm has changed in business too. Customers in new networked economy have been more sophisticated and have high expectations from companies. Therefore, companies need to be very flexible to be able to satisfy their needs and wants.

Mass production that is introduced in United States in 1908 by Henery Ford in Automobile industry, and has been the dominant paradigm in production and marketing area for a long time, satisfy new high expected and more- demanding customers no more. Hence companies have started to take more flexible production methods in order to fulfill customers.

At its most flexible manner, companies try to mass customize their products in order to satisfy customers and bring most value for them.

As Pine says, it's a kind of paradigm shifting in production and marketing area, in which companies are changing build-to-forecast strategies to build-to-order ones, to prepare superior value to customers.

As mentioned in this paper, now companies try to define value from customers' point of view. Because actually they are becoming the most determinant factor in new business environment.

By mass customizing products, companies enter customers into production process and tailor different features of products to customers wants. And finally make superior value for them, something that new customers are looking for.

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